

ABSTRACT OF THE DISCLOSURE

A system and method for enabling Intellectual Property (IP) Blocks to be reused at a system level. The present invention represents the IP blocks as blocks that exchange messages without needing to represent the functionality of the IP blocks. The implementations of these IP blocks exchanges messages through complex signaling protocols. In conventional systems, interfacing between IP blocks that use different signaling protocols is a tedious and error prone design task. The present invention uses regular expression based protocol descriptions to show how to map the message onto a signaling protocol. Given two protocols, the present invention builds an interface machine that automatically labels data referenced by all protocols. The present invention is capable of generating the interface even when the data sequencing of the two protocols differs.